

Recent IBM patents

The following patents were recently issued by the countries in which the inventions were made. For U.S. patents, titles and names supplied to us by the U.S. Patent Office are reproduced exactly as they appear on the original published patent.

Federal Republic of Germany

2,654,569	W. Hasler, E. Lennemann, and S. Padmanabhan	Printer for Different Character Densities
3,275,025,008	M. Briska, K. Schackert, and H. G. Seifert	Offset Printing Form and Method of Making It
3,275,147,808	W. D. Ruh	Method of Producing a Metallic Thin Film Magnetic Disk
3,275,441,808	A. Brunsch, W. Steinger, and G. Trippel	Method of Determining Dispersion, Particle Density or Viscosity
3,275,447,708	U. Behringer, J. Greschner, and H. J. Trumpp	Method of Making Trenches with Substantially Vertical Sidewalls in Silicon Through Reactive Ion Etching
3,369,015,408	H. Chilinski, H. Hajdu, S. Richter, and K. J. Getzlaff	Device in Instruction Unit of Pipeline Processor for Instruction
3,369,054,508	F. Schwerdt and H. Mueller	Method of Renewing Defective Copper Conductors on the External Planes of Multilayer Circuit Boards

France

73,870	Y. Bonnet	Circuit for Holding a Pulse During a Predetermined Time Interval and an Improved Monostable Multivibrator
97,754	D. Godard and E. Morlec	Tone Detector and Multifrequency Receiver Using Said Detector
104,293	D. Dupuy d'Angeac, M. Lechaczynski, A. Pauporte, and P. Thery	Device for Loading and Reading Strings of Latches in a Data Processing System

Sweden

49,388	N. G. Stalberg	Video Signal Detector
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United States

4,630,344	W. B. Boyle, R. Candelaria, Jr., and E. P. Hecker	Apparatus and Method for Assembling Parts
4,630,356	R. Christie, B.-T. Hwang, S.-M. Ku, and J. M. Sickler	Method of Forming Recessed Oxide Isolation with Reduced Steepness of the Birds' Neck
4,630,941	T. J. Chainer, R. A. Scranton, and D. A. Thompson	Tubular Squeeze Bearing Apparatus with Rotational Restraint
4,631,219	H. J. Geipel, Jr., and P.-H. Pan	Growth of Bird's Beak Free Semi-Rox
4,631,423	S. M. Faris	Ultra High Resolution Josephson Sampling Technique
4,631,428	D. W. Grimes	Communication Interface Connecting Binary Logic Unit Through a Trinary Logic Transmission Channel
4,631,661	W. Eibach, K. M. Roehr, and K. M. Schulz	Fail-Safe Data Processing System
4,631,663	H. Chilinski, K. J. Getzlaff, J. Hajdu, and F. J. Raeth	Macroinstruction Execution in a Microprogram-Controlled Processor
4,631,670	D. J. Bradley and W. B. Ott	Interrupt Level Sharing
4,631,673	L. M. Haas and B. G. Lindsay	Method for Refreshing Multicolumn Tables in a Relational Data Base Using Minimal Information

4,631,674	G. O. Blandy	Active Wait
4,631,706	G. D. Batalden, D. W. Baxter, and N. R. Davie	System for Preventing the Overwriting of Previously Optically Recorded Data and for Reading Optically Recorded Data During Writing
4,631,751	K. L. Anderson, F. C. Mintzer, and G. Goertzel	Method for Enlarging a Binary Image
4,631,821	D. E. Houser	Method for Joining Metal Components to a Substrate
4,632,294	W. O. Druschel, A. Kostenko, and R. G. Meinert	Process and Apparatus for Individual Pin Repair in a Dense Array of Connector Pins of an Electronic Packaging Structure
4,632,295	V. A. Brusic, P. J. Elmgren, C. J. Owen, D. W. Sissenstein, Jr., and H. L. Yeh	Reduction Atmosphere Workpiece Joining
4,632,398	J. W. Freeman and G. E. Webb	Reset System for Microcomputer Using Program Cartridges
4,632,583	D. P. Nash	Flexible Leader
4,632,724	D. C. Chesebro and R. W. Sweetser	Visibility Enhancement of First Order Alignment Marks
4,632,883	J. K. Howard and M. T. Moshref	Vertical Recording Medium with Improved Perpendicular Magnetic Anisotropy Due to Influence of Beta-Tantalum Underlayer
4,633,129	J. J. Cuomo, H. R. Kaufman, and S. M. Rosnagel	Hollow Cathode
4,633,243	J. E. Bresenham, R. J. Bowater, A. C. Gay, and N. R. Sheen	Method of Storing Characters in a Display System
4,633,245	M. L. Blount, B. T. Hailpern, R. A. Heller, L. W. Hoevel, and G. E. Trivett	Local Area Network Interconnect Switching System
4,633,333	A. W. Blanco, J. A. McDowell, and D. A. Yeary	Detection of Instantaneous Speed Variations in a Tape Drive
4,633,345	D. S. Keener	Positioning Misaligned Disk Heads
4,633,349	J. L. Beck, D. L. Good, and D. R. Stacer	Disk Drive Air Filter Assembly
4,633,387	M. H. Hartung, A. H. Nolte, D. G. Reed, and G. E. Tayler	Load Balancing in a Multiunit System
4,633,394	C. J. Georgiou and A. P. Ravn	Distributed Arbitration for Multiple Processors
4,633,433	I. M. Miller	Display System for Displaying Maps Having Two-Dimensional Roads
4,633,436	G. A. Flurry	Real-Time Rub-Out Erase for an Electronic Handwriting Facility
4,633,440	F. J. Pakulski	Multi-Port Memory Chip in a Hierarchical Memory
4,633,451	K. Y. Ahn and T. H. DiStefano	Optical Servo for Magnetic Disks
4,633,456	F. S. Luecke	Two Axis Electromagnetic Actuator
4,633,468	R. O. Skatrud and C. L. Storm	Detecting and Recovering from Fault Condition in a Serial Loop Data Transmission System
4,633,490	G. Goertzel and J. L. Mitchell	Symmetrical Optimized Adaptive Data Compression/Transfer/Decompression System
4,633,507	A. T. Cannistra, M. Kida, M.-H. G. Tung, and T. Ushiroda	Apparatus for Reading Mark Sheets
4,634,041	C. Prasad and A. F. Szewczyk	Process for Bonding Current Carrying Elements to a Substrate in an Electronic System, and Structures Thereof
4,634,267	R. O. Jones, W. F. Price, Jr., G. E. Siemer, and M. H. Ulrich	Photocopier Scanning Apparatus and Method for Adjustment
4,634,638	N. G. Ainslie, J. M. Harvilchuck, M. J. Interrante, W. J. King, Jr., P. H. Palmateer, and J. F. Sullivan	High Melting Point Copper-Gold-Tin Brazing Alloy for Chip Carriers
4,635,107	J. A. Turner	Electron Beam Position Control for Color Display
4,635,139	S. V. Nguyen and J. M. Severson	Asperity Burst Writer
4,635,186	P. W. Oman, M. A. Rinaldi, V. W. Russo, and G. Salyer	Detection and Correction of Multi-Chip Synchronization Errors
4,635,194	M. E. Burger, S. L. George, and C. H. Ngai	Instruction Buffer Bypass Apparatus
4,635,228	G. J. Jordy and J. M. Mosley	Random Access Memory Employing Unclamped Complementary Transistor Switch (CTS) Memory Cells and Utilizing Word to Drain Line Diode Shunts
4,635,250	C. J. Georgiou	Full-Duplex One-Sided Cross-Point Switch
4,635,919	A. B. Habich and R. E. Hunt	Floating Document Throat
4,635,985	P. A. Rooke	Self-Pivoting Robotic Gripper Tool
4,636,019	J. B. Gillett and J. A. Miraglia	Connector Mechanisms
4,636,027	R. R. Dube	Holographic Image Processing Systems
4,636,073	R. R. Williams	Universal Calibration Standard for Surface Inspection Systems
4,636,098	E. A. Halter, B. D. Purcell, and E. E. Toutant	Ribbon Drive Coupling and Cartridge Tilt Arrangement for Print Line Visibility
4,636,251	I. S. Mahmoud	Materials for Electrical Contact
4,636,770	P. H. Jackson	Display Terminal
4,636,822	C. F. Codella and S. Ogura	GaAs Short Channel Lightly Doped Drain MESFET Structure and Fabrication
4,636,834	J. F. Shepard	Submicron FET Structure and Method of Making
4,636,892	W. J. Frieauff, D. M. Janssen, A. J. Kirton, R. M. Murphy, and L. Rose	Flexible Disk Drive Optimized for Automated Manufacture

4,636,946	M. H. Hartung and G. E. Tayler	Method and Apparatus for Grouping Asynchronous Recording Operations
4,636,948	J. M. Gdaniec, R. J. Sahulka, and D. B. Soll	Method for Controlling Execution of Application Programs Written in High Level Program Language
4,636,990	C. U. Buscaglia and L. E. Knepper	Three State Select Circuit for Use in a Data Processing System or the Like
4,637,024	J. D. Dixon, R. H. Farrell, G. A. Marazas, A. B. McNeill, Jr., and G. U. Merckel	Redundant Page Identification for a Catalogued Memory
4,637,038	D. H. Boyle	High Speed Counter
4,637,123	V. Cazcarra and J. LeRouelle	Method of Standardizing and Stabilizing Semiconductor Wafers
4,637,714	A. L. Flamholz	Inspection System for Pellicalized Reticles
4,637,853	B. Bumble, J. J. Cuomo, J. S. Logan, and S. M. Rosnagel	Hollow Cathode Enhanced Plasma for High Rate Reactive Ion Etching and Deposition
4,638,183	D. A. Rickard and G. H. Rudelis	Dynamically Selectable Polarity Latch
4,638,342	J. L. Freeouf, T. N. Jackson, S. E. Laux, and J. M. Woodall	Space Charge Modulation Device
4,638,347	S. S. Iyer	Gate Electrode Sidewall Isolation Spacer for Field Effect Transistors
4,638,424	T. W. Beglin, J. R. Pence, H. E. Kamionka, and J. W. Pence	Managing Data Storage Devices, Connected to a Digital Computer
4,638,425	M. H. Hartung	Peripheral Data Storage Having Access Controls with Error Recovery
4,638,426	A. Chang, J. Cocke, M. F. Mergen, and G. Radin	Virtual Memory Address Translation Mechanism with Controlled Data Persistence
4,638,427	D. B. Martin	Performance Evaluation for an Asymmetric Multiprocessor System
4,638,449	A. H. Frey	Multiplier Architecture
4,638,462	T. V. Rajeevakumar and L. M. Terman	Self-Timed Precharge Circuit
4,638,463	L. R. Rockett, Jr.	Fast Writing Circuit for a Soft Error Protected Storage Cell
4,638,464	H. C. Cranford, Jr. and S. J. Garvin	Charge Pump System for Non-Volatile Ram
4,638,482	W. R. Griffin, L. G. Heller, and P. N. Horowitz	Random Logic Error Detecting System for Differential Logic Networks
4,638,858	R. C. Chu	Composite Heat Transfer Device with Pins Having Wings Alternately Oriented for Up-Down Flow
4,639,126	K. A. Bushaw, L. A. Bustamante, and J. J. McCurry	Method for Producing Duplex Copy Sets from a Duplex Original Set
4,639,380	W. J. Amelio, D. W. Hume, D. G. McBride, and R. G. Rickert	Process for Preparing a Substrate for Subsequent Electroless Deposition of a Metal
4,639,572	B. Gruzman and C.-O. Nilsen	Laser Cutting of Composite Materials
4,639,622	J. J. Goodwin and N. C. Lu	Boosting Word-Line Clock Circuit for Semiconductor Memory
4,639,678	E. G. Schlig and S. G. Chamberlain	Absolute Charge Difference Detection Method and Structure for a Charge Coupled Device
4,639,802	J. L. Neubauer, L. J. Schmidt, and S. H. Voss	Shrink Ring for Disk Clamping
4,639,829	C. D. Ostergren and J. A. Paivanas	Thermal Conduction Disc-Chip Cooling Enhancement Means
4,639,856	J. Hrustich and W. R. Sitler	Dual Stream Processor Apparatus
4,639,919	Y.-H. E. Chang, A. J. Gruodis, H. P. Muhlfeld, Jr., C. W. Rodriguez, and M. L. Shulman	Distributed Pattern Generator
4,640,221	S. G. Barbee, G. P. Devine, W. J. Patrick, and G. Seeley	Vacuum Deposition System with Improved Mass Flow Control
4,640,485	G. D. Day, J. K. Flack, I. Golledge, C. J. Hillary, J. V. Pike, and M. H. Watson	Adjustable Support for Display Monitor
4,640,502	A. B. Habich and R. E. Hunt	Envelope Hopper for Feed and Delivery
4,640,718	P. R. Alnot, D. J. Auerbach, C. R. Brundle, and D. C. Miller	Process for Accelerating Pd/Sn Seeds for Electroless Copper Plating
4,640,738	E. C. Fredricks and M. M. Nanda	Semiconductor Contact Protection
4,641,148	S. Dyer, J. J. Molloy, T. Nguyen, D. M. Riherd, W. F. Voit, Jr., and D. L. West	Thermal Printhead with Ribbon Exit Guide
4,641,170	S. Ogura, J. Riseman, N. Rovedo, and J. F. Shepard	Self-Aligned Lateral Bipolar Transistors
4,641,262	B. L. Bryan, M. Druckerman, A. W. McDowell, I. H. Schneider, and G. L. Newkirk	Personal Computer Attachment for Host System Display Station
4,641,274	E. W. Swank	Method for Communicating Changes Made to Text from a Text Processor to a Remote Host
4,641,357	J. Satoh	Method for Reading a Document Image
4,641,971	H.-E. Korth	White Light Interferometer
4,642,163	J. Greschner, F. W. Schwerdt, and H. J. Trumpp	Method of Making Adhesive Metal Layers on Substrates of Synthetic Material and Device Produced Thereby
4,642,422	R. L. Garwin and J. L. Levine	Calibration of a Scanning Light Interrupt Type of Data Input Interface
4,642,438	K. W. Beumer, C. A. Gaston, C. H. Locke, A. Mack, B. C. O'Neill, W. J. Pinckney, and A. D. Wilson	Workpiece Mounting and Clamping System Having Submicron Positioning Repeatability

4,642,459	N. S. Caswell and I. F. Chang	Light Pen Input System Having Two-Threshold Light Sensing
4,642,491	D. M. Kenney and J. A. Mandelman	Single Transistor Driver Circuit
4,642,562	D. W. Collins and M. A. Weed	Phase Difference Demodulator
4,642,618	E. A. Johnson and L. A. Price II	Tool Failure Detector
4,642,709	A. W. Vinal	Twin Track Vertical Magnetic Recording Servo Control Method
4,642,743	J. K. Radcliffe	Power Supplies with Magnetic Amplifier Voltage Regulation
4,642,763	E. M. Cummins	Batch File Processing
4,642,764	M. A. Auslander, M. E. Hopkins, and P. W. Markstein	Method of Developing Formal Identities and Program Bases in an Optimizing Compiler
4,642,765	J. Cocke, P. W. Markstein, and V. I. Markstein	Optimization of Range Checking
4,642,781	L. Szonyi	System for Automatically Calibrating a Robot
4,642,790	J. F. Minshull and M. C. Pinnell	Presentation Space Management and Viewporting on a Multifunction Virtual Terminal
4,642,792	S. F. Clements, P. D. Motola, and S. F. Swift	Data Processor Printer Setup Through a Remote Display Terminal
4,642,810	J.-L. Picard	Repetitive Sequence Data Transmission System
4,643,601	D. P. Nash, D. K. Rex, L. R. Siegl, and W. Wussow	Ribbon Positioning Mechanism
4,643,627	J. G. Bednorz, P. L. Gueret, H. E. Nievergelt, H. Ott, W. D. Phol, and W. F. Widmer	Vacuum Transfer Device
4,643,796	R. W. Burns	Moly Mask Removal Tool
4,643,948	A. F. Diaz and R. A. Hernandez	Coatings for Ink Jet Nozzles
4,644,108	W. G. Crouse and D. R. Irvin	Adaptive Sub-Band Echo Suppressor
4,644,163	R. K. Selander	Material Identification Using Infrared Thermometry
4,644,237	J. E. Frushour, M. L. Mahar, C. J. Majka, and J. E. Swenson	Collision Avoidance System
4,644,264	J. G. Beha, R. W. Dreyfus, A. M. Hartstein, and G. W. Rubloff	Photon Assisted Tunneling Testing of Passivated Integrated Circuits
4,644,265	E. E. Davidson and D. A. Kiesling	Noise Reduction During Testing of Integrated Circuit Chips
4,644,335	S. H. Wen	Apparatus and Method for Monitoring Drill Bit Condition and Depth of Drilling
4,644,340	B. L. Holloway and R. J. Llewellyn	Programmable Timing Circuit for Cathode Ray Tube
4,644,344	T. A. Larsen, D. H. Martin, and F. T. Moth	Electrochromic Matrix Display
4,644,432	D. E. Heim	Three Pole Single Element Magnetic Read/Write Head
4,644,468	W. A. Doster and R. Sachsenmaier	Name Usage Support Through Distributed Processing Networks Linked by Bridges and/or Gateways
4,644,470	B. A. Feigenbaum, R. Sachsenmaier, and J. W. Skowbo	Non-Unique Names for Broadcast Messages
4,644,478	L. K. Stephens and R. B. Hayes	Monitoring and Alarm System for Custom Applications
4,644,493	A. N. Chandra, L. D. Comerford, and S. R. White	Implementing a Shared Higher Level of Privilege on Personal Computers for Copy Protection of Software
4,644,497	S. Tajima and S. Watanabe	Serial Keyboard Interface System with Frame Retransmission after Non-Timely Acknowledgements from Data Processor
4,644,503	D. F. Bantz, S. Gupta, and B. D. Lucas	Computer Memory System with Integrated Parallel Shift Circuits
4,644,532	F. D. George, J. M. Jaffe, and F. H. Moss	Automatic Update of Topology in a Hybrid Network
4,644,542	H. Aghili, F. I. Cristian, and H. R. Strong	Fault-Tolerant Atomic Broadcast Methods
4,644,564	F. B. Dolivo, G. Ungerboeck, and T. D. Howell	Decoding the Output Signal of a Partial-Response Class-IV Communication or Recording Device Channel
4,645,238	J. P. Vincent, M. E. Weidmann, and D. E. Curtis	Annotated Calendar Assembly
4,645,338	A. Juliana, Jr., M. R. Latta, G. V. Sincerbox, and C. G. Willson	Optical System for Focus Correction for a Lithographic Tool
4,645,954	S. E. Schuster	ECL to FET Interface Circuit for Field Effect Transistor Arrays
4,646,236	P. N. Crockett, R. P. Jewett, A. J. Scriver, and T. A. Tucker	Pipelined Control Apparatus with Multi-Process Address Storage
4,646,250	J. F. Childress	Data Entry Screen
4,646,356	K. L. Anderson, J. L. Mitchell, W. B. Pennebaker, and G. Goertzel	Method for Converting a Bit Map of an Image to a Run Length or Run End Representation
4,646,573	E. P. Stoll	Scanning Acoustic Microscope
4,646,958	R. T. Howard, Jr.	Fluxless Soldering Process Using a Silane Atmosphere
4,647,155	H. S. Bjorklund, D. N. Cisneros, and R. Yardy	Multi-Laser Optical Signal Recorders
4,647,361	H. J. Bauer	Sputtering Apparatus
4,647,494	B. S. Meyerson, R. V. Joshi, R. Rosenberg, and V. V. Patel	Silicon/Carbon Protection of Metallic Magnetic Structures
4,647,954	V. Graf, P. L. Gueret, and C. A. Mueller	Low Temperature Tunneling Transistor

4,647,992	A. W. Vinal	Combined Magnetic Channel Signal Sensor and Servo Control Track Following System and Method
4,648,029	R. J. Cooper, M. A. Marsico, J. C. Pescatore, and P. D. Sullivan	Multiplexed Interrupt/DMA Request Arbitration Apparatus and Method
4,648,031	E. H. Jenner	Method and Apparatus for Restarting a Computing System
4,648,032	H. Romero, Jr., J. C. St. Clair, and J. D. Wagoner	Dual Purpose Screen/Memory Refresh Counter
4,648,033	D. O. Lewis, L. A. McMahon, and T. L. Schardt	Look-Aside Buffer LRU Marker Controller
4,648,042	D. E. Staiger	Method of and Arrangement for Generating Pulses of an Arbitrary Time Relation During Immediately Successive Assumed Pulse Intervals with a Very High Accuracy and Time Resolution
4,648,046	D. B. Copenhaver, E. P. Devany, and L. Hedgemon	Editing and Reflecting Color Display Attributes of Non-Active Profiles
4,648,047	P. T. Berkland, A. W. Heath, and G. K. Waddell	Interactive Operator Selection of Alternative Implementations of Printer Functions
4,648,062	S. E. Johnson, J. Karat, and T. M. Ruiz	Method for Providing an On Line Help Facility for Interactive Information Handling Systems
4,648,067	J. T. Repass, T. M. Ruiz, K. O. Shipp, Jr., and R. B. Wood	Footnote Management for Display and Printing
4,648,069	M. R. Funk, P. R. Herrold, and T. Nohzawa	Character Generator
4,648,071	J. T. Repass, T. M. Ruiz, K. O. Shipp, Jr., and R. B. Wood	Designation of Footnotes and Footnote Reference
4,648,073	D. M. Kenney	Sequential Shared Access Lines Memory Cells
4,648,087	R. A. Scranton and D. A. Thompson	Capacitive Sensing Employing Thin Film Inductors
4,648,102	V. Riso and R. Kuhne	Bus Interface Device for a Data Processing System